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cont.

Error bars represent standard error. Smooth curve was determined by nonlinear regression using the logistic equation applied to pooled data. Fitted parameters are (GluR1) $I_{\max} = 1.0$, $EC_{50} = 27 \mu\text{M}$, $n_H = 1.54$; (GluR1 + PS) $I_{\max} = 0.17$, $EC_{50} = 23 \mu\text{M}$, $n_H = 0.9$; (GluR3) $I_{\max} = 1.15$, $EC_{50} = 27 \mu\text{M}$, $n_H = 1.44$; (GluR3 + PS) $I_{\max} = 0.33$, $EC_{50} = 32 \mu\text{M}$, $n_H = 1.93$; (GluR6) $I_{\max} = 1.0$, $EC_{50} = 550 \text{ nM}$, $n_H = 1.1$; (GluR6 + PS) $I_{\max} = 0.69$, $EC_{50} = 570 \text{ nM}$, $n_H = 1.2$. Figure 2F is a graph of data showing the concentration dependence of PS inhibition of recombinant GluR1 (○), GluR3 (□), and GluR6 (▲) receptors. Results are expressed as percentage change in the peak $100 \mu\text{M}$ (GluR1 and GluR3) or $10 \mu\text{M}$ (GluR6) kainate-induced current in the presence of PS. Each data point is the mean of three experiments; error bars indicate S.E.M. For GluR1 and GluR3, smooth curves are derived from fits to the Michaelis-Menten equation, as fits to the logistic equation yielded Hill coefficients close to 1, with no significant improvement in sum of squares (F -test, $P > 0.05$). Fitted parameters are (GluR1) $EC_{50} = 43 \mu\text{M}$, $E_{\max} = -99\%$; (GluR3) $EC_{50} = 12 \mu\text{M}$, $E_{\max} = -90\%$. For GluR6, the smooth curve is derived from a fit to the logistic equation, as Michaelis-Menten fits were significantly poorer (F -test, $P < 0.05$). Maximum inhibition was constrained to 100%, as an unconstrained fit yielded an extrapolated maximum inhibition $>100\%$. Fitted parameters are $EC_{50} = 80 \mu\text{M}$, $n_H = 0.29$.--

Please replace the paragraph beginning at page 5, line 4, with the following rewritten paragraph:

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--Figure 3 is a compilation of graphical representations of data which indicate that neuroactive steroids modulate NMDA responses of oocytes injected with specific NMDA receptor subunits. Figure 3(A) indicates the potentiation of the $100 \mu\text{M}$ NMDA response by PS in oocytes injected with NR1₁₀₀ + NR2A cRNA. The solid bar indicates the period of NMDA exposure; the open bar indicates the period of PS exposure. Figure 3(B) indicates inhibition of the $100 \mu\text{M}$ NMDA response by $3\alpha 5\beta\text{S}$ in oocytes injected with NR1₁₀₀ + NR2A cRNA. The solid bar indicates the period of NMDA exposure; the shaded bar indicates the period of $3\alpha 5\beta\text{S}$ exposure. Figure 3(C) indicates modulation of agonist efficacy by PS and $3\alpha 5\beta\text{S}$ in oocytes injected with NR1₁₀₀ + NR2A cRNA. PS ($100 \mu\text{M}$) increases the NMDA I_{\max} but does not affect the EC_{50} . $3\alpha 5\beta\text{S}$ ($100 \mu\text{M}$) markedly reduces the NMDA I_{\max} with little effect on EC_{50} . Peak

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NMDA responses are normalized to the peak 100 μM NMDA response. Each *data point* represents the mean of three experiments. *Error bars* represent standard error. *Smooth curves* are derived from fits to the logistic equation. Fitted parameters are (control) $\text{EC}_{50}=29 \mu\text{M}$, $E_{\text{max}}=1.14$, $n_{\text{H}}=1.43$; (+PS) $\text{EC}_{50}=30 \mu\text{M}$, $E_{\text{max}}=3.21$, $n_{\text{H}}=1.54$; (+ $3\alpha 5\beta\text{S}$) $\text{EC}_{50}=15 \mu\text{M}$, $E_{\text{max}}=0.35$, $n_{\text{H}}=1.66$. Figure 3(D) is a graph indicating the concentration dependence of steroid modulation of the NMDA response of oocytes injected with NR1₁₀₀ + NR2A cRNA. NMDA (100 μM) and the indicated concentration of PS (●), $3\beta 5\beta\text{S}$ (Δ), or $3\alpha 5\beta\text{S}$ (\square) were applied simultaneously for 10 s. The peak NMDA-induced current is expressed relative to the average of control NMDA responses determined before application of steroid and after steroid washout. *Points* indicate mean of 6 (PS and $3\alpha 5\beta\text{S}$), and 4 ($3\beta 5\beta\text{S}$), experiments. *Error bars* indicate S.E.M. Smooth curves are derived from fits to the Michaelis-Menten equation, as fits to the logistic equation yielded Hill coefficients close to 1, with no significant improvement in sum of squares (*F*-test, $P > 0.05$). Fitted parameters are (for PS) $\text{EC}_{50}=32 \mu\text{M}$, $E_{\text{max}}=4.43$ (for $3\alpha 5\beta\text{S}$) $\text{EC}_{50}=41 \mu\text{M}$, $E_{\text{max}}=0.1$; (for $3\beta 5\beta\text{S}$) $\text{EC}_{50}=79 \mu\text{M}$, $E_{\text{max}}=0.26$. (E) Concentration dependence for PS enhancement (●) and $3\alpha 5\beta\text{S}$ (Δ) and $3\beta 5\beta\text{S}$ (\square) inhibition of the NMDA response of oocytes injected with NR1₁₀₀ cRNA. NMDA (300 μM) and the indicated concentration of steroid were applied simultaneously. The peak NMDA-induced current is expressed relative to the average of control NMDA responses determined before application of steroid and after steroid washout. *Points* indicate mean of 6 (PS), 3 ($3\beta 5\beta\text{S}$), and 3 ($3\alpha 5\beta\text{S}$) experiments. *Error bars* indicate S.E.M. Smooth curves are derived from fits to the Michaelis-Menten equation, as fits to the logistic equation yielded Hill coefficients close to 1, with no significant improvement in sum of squares (*F*-test, $P > 0.05$). Fitted parameters are (for PS) $\text{EC}_{50}=26 \mu\text{M}$, $E_{\text{max}}=2.14$; (for $3\alpha 5\beta\text{S}$) $\text{EC}_{50}=57 \mu\text{M}$, $E_{\text{max}}=0.02$; (for $3\beta 5\beta\text{S}$) $\text{EC}_{50}=144 \mu\text{M}$, $E_{\text{max}}=0.17$.--

In the claims:

Please cancel claims 30 and 31 without prejudice.

All the pending claims currently under examination are reproduced below for the Examiner's convenience. Please amend claims 1 and 2 as follows: